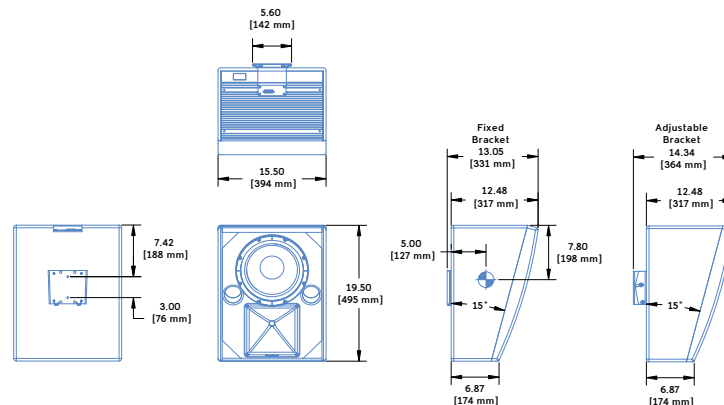


HMS-10™ : Cinema Surround Loudspeaker



- Dimensions** 15.50" w x 19.50" h x 12.48" d (without mounting bracket)
(394 mm x 495 mm x 317 mm)
- Weight** 29.1 lbs (13.2 kg) with mounting bracket
- Enclosure** Multi-ply hardwood
- Finish** Black textured
- Protective Grille** Acoustically transparent, black cloth-covered frame
- Mounting** Comes standard with a fixed bracket; an optional adjustable bracket with downtilt and uptilt is also available

Meyer Sound's HMS-10 is a full-range, two-way loudspeaker optimized for surround channels in cinemas, theatres, and re-recording changes. The self-powered HMS-10 maintains a wide dynamic range, full fidelity, and complete clarity during the most demanding of digital soundtracks. As part of the EXP line of cinema products, the HMS-10 is optimized for use with other EXP loudspeakers, including the Acheron® screen channel loudspeakers. Boasting a wide frequency range of 55 Hz to 18 kHz and a maximum peak SPL of 126 dB at 1 meter with very low distortion, the HMS-10 ensures that the full intensity and nuance of cinema surround channels reach each listener without compromise.

The HMS-10's transducers include a 10-inch low-frequency long excursion cone driver and a 2-inch diaphragm high-frequency compression driver on a symmetrical constant-directivity 80-degree horn that delivers exceptional coverage. The proprietary drivers — designed and manufactured at Meyer Sound's headquarters in Berkeley, California — are powered by two channels of onboard amplification that include an active crossover, driver protection,

and frequency and phase response correction circuitry.

Balanced audio and DC power are received by the HMS-10 from a Phoenix™ 5-pin male connector on its top panel. Powering the unit from an external source eliminates the need for wiring conduits while still preserving the advantages of self-powered loudspeaker systems. The HMS-10's amplifier and signal-processing circuits store DC power and tolerate voltage drops, thereby accommodating light-gauge cables and lengthy cable runs.

HMS-10 loudspeakers require an MPS-488HP * external power supply. The single-space 19-inch rack unit receives balanced audio from its XLR female inputs and routes the audio, along with 48 V of DC power, to its channel outputs. The channel outputs, which are available as Phoenix 5-pin male connectors, deliver DC power to up to eight HMS-10 loudspeakers at cable lengths up to 150 feet with just 1 dB of loss in peak SPL using 18 AWG wire. The use of composite multiconductor cables (such as Belden® 1502 or equivalent) allows a single cable

to carry both DC power and balanced audio to the HMS-10. Longer cable runs are possible for moderate applications that don't drive the loudspeakers to maximum output, or for installations using heavier wire gauges.

Meyer Sound's industry standard self-powered loudspeaker technology not only delivers unparalleled and consistent audio fidelity but also simplifies installation, whether designing a new room from scratch or adding surround channels to an existing setup.

The HMS-10's compact size, textured finish, and black cloth grille blend smartly with any theater decor. The HMS-10 comes standard with a fixed bracket; an optional adjustable bracket is also available for wall mounting the HMS-10 with downtilt or uptilt.

* The MPS-488HP external power supply replaces the MPS-488 model, which was originally designed for use with MM-4XP loudspeakers. The MPS-488 is also compatible with HMS-10 loudspeakers and can drive up to four units.

FEATURES & BENEFITS

- Exceptional fidelity and extended high-frequency performance
- Constant-Q horn yields uniform response throughout coverage area

- Extraordinarily flat amplitude and phase response for tonal accuracy
- Seamless integration with Acheronscreen channel loudspeakers

APPLICATIONS

- Cinemas and theatres
- Re-recording stages
- Surround mixing for production and postproduction facilities

HMS-10 SPECIFICATIONS

ACOUSTICAL	Operating Frequency Range ¹ Frequency Response ² Phase Response Maximum Peak SPL ³ Dynamic Range ⁴	55 Hz – 18 kHz 58 Hz – 17.5 kHz ±4 dB 290 Hz – 18 kHz ±45° 126 dB 100 dB
COVERAGE		80° symmetrical
CROSSOVER ⁵		2.5 kHz
TRANSDUCERS	Low Frequency High Frequency	10" low-frequency long excursion cone driver 2" diaphragm high-frequency compression driver
CONNECTOR	Audio/Power Connector Power Wiring Audio Wiring	Single Phoenix 5-pin male (3 pins for balanced audio, 2 pins for DC power) Pin 1: 48 V DC – Pin 2: 48 V DC + Pin 3: Chassis/earth through 220 k Ω , 1000 pF, 15 V clamp network to provide virtual ground lift at audio frequencies Pin 4: Signal – Pin 5: Signal +
AUDIO INPUT	Type Maximum Common Mode Range Input Impedance DC Blocking CMRR RF Filter TIM Filter Nominal Input Sensitivity Input Level	Differential, electronically balanced ±15 V DC, clamped to earth for voltage transient protection 10 k Ω differential between pins 4 (–) and 5 (+) Differential DC blocking up to the maximum common mode voltage >50 dB, typically 80 dB (50 Hz – 500 Hz) Common mode: 425 kHz; Differential mode: 142 kHz Integral to signal processing (<80 kHz) 6.0 dBV (2.0 V rms, 2.8 V peak) continuous average is typically the onset of limiting for noise and music Audio source must be capable of producing +16 dBV (6.3 V rms, 9.0 V peak) into 600 Ω to produce the maximum peak SPL over the operating bandwidth of the loudspeaker
AMPLIFIER	Amplifier Type Output Power ⁶ THD, IM, TIM Load Capacity Cooling	Two-channel complementary MOSFET output stages (class AB/Bridged) 300 W total <.02% 4 Ω low channel; 12 Ω high channel Convection
DC POWER	Voltage Requirement Current Draw ⁷ : Idle Current Maximum Long-Term Continuous Current (>10 sec) Burst Current (<1 sec) Ultimate Short-Term Peak Current Draw Inrush Current	48 V DC 0.35 A rms 2.03 A rms 3.31 A rms 3.45 A peak 4.55 A peak

NOTES:

1. Recommended maximum operating frequency range. Response depends on loading conditions and room acoustics.
2. Measured free-field with pink noise at 1 meter, 1/3-octave frequency resolution.
3. Measured free-field with music, referred to 1 meter.
4. Taken from peak SPL, referred to A-wtd noise floor.
5. At this frequency, the transducers produce equal sound pressure levels.
6. Amplifier wattage based on the maximum unclipped burst sine-wave rms voltage the amplifier will produce into the nominal load impedance.
7. Current draw measured at 48 V DC.



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ARCHITECT SPECIFICATIONS

The loudspeaker shall be a self-powered, full-range system; the transducers shall consist of a 10-inch low-frequency long excursion cone driver and a 2-inch diaphragm high-frequency compression. The loudspeaker system shall incorporate internal processing electronics and a two-channel amplifier, one channel for each driver. Processing functions shall include equalization, phase correction, signal division, and protection for the high- and low-frequency sections. The crossover point shall be 2.5 kHz. Amplifier channels shall be class AB/Bridged with complementary MOSFET output stages. Amplifier output power shall be 300 watts total. Distortion (THD, IM, TIM) shall not exceed 0.02%.

Performance specifications for a typical production unit shall be as follows, measured at 1/3-octave resolution: operating

frequency range shall be 55 Hz to 18 kHz; phase response shall be ±45° from 290 Hz to 18 kHz; maximum peak SPL shall be 126 dB at 1 meter, free field. Coverage shall be 80-degree horizontal by 80-degree vertical.

The loudspeaker shall be equipped with a single Phoenix 5-pin male connector (three pins for balanced audio and two pins for DC power). The audio input shall be electronically balanced with a 10-k Ω impedance and accept a nominal 6.0 dBV (2.0 V rms, 2.8 V peak) input signal. DC blocking and RF filtering shall be provided, and CMRR shall be greater than 50 dB and typically 80 dB (50 Hz to 500 Hz).

Power requirements for the loudspeaker shall be a Meyer Sound MPS power supply capable of delivering 48 V DC. Current draw for the loudspeaker during burst (<1 sec) shall

be 3.31 A rms at 48 V. Current inrush during turn-on shall not exceed 4.55 A peak at 48 V.

All components shall be mounted in an enclosure constructed of multi-ply hardwood with a black textured finish. The loudspeaker shall include a fixed bracket; an optional adjustable bracket with downtilt and uptilt shall also be available. The protective grille shall be an acoustically transparent, black cloth-covered frame.

Dimensions for the loudspeaker shall be 15.50" wide x 19.50" high x 12.48" deep (394 mm x 495 mm x 317 mm) without mounting bracket. Weight with mounting bracket shall be 29.1 lbs (13.2 kg).

The loudspeaker shall be the Meyer Sound HMS-10.